

What is claimed is:

1. A device for sweeping across a substantially horizontal surface, the device comprising:
 - 5 a broom having a head for sweeping across the horizontal surface and a handle attached thereto for pushing the head;
 - a spray bar disposed on the head for directionally discharging fluid onto the horizontal surface across which the head may sweep; and
 - a mechanism for actuating the spray bar in an oscillating manner, so as to permit an
 - 10 fluid discharging from the spray bar to move back and forth along an arcuate path.
2. A device as set forth in claim 1, further including a valve attached to the broom for regulating the flow of fluid to the spray bar
- 15 3. A device as set forth in claim 1, wherein the spray bar is mounted on the broom head.
4. A device as set forth in claim 1, wherein the spray bar is integrated into the head of the broom.
- 20 5. A device as set forth in claim 1, wherein the spray bar includes a plurality of spray jets for individually discharging a stream of fluid from the spray bar.
6. A device as set forth in claim 5, wherein the spray jets are positioned along a
- 25 plurality of rows.
7. A device as set forth in claim 5, wherein the spray jets are removably disposed on the spray bar to permit access within the spray bar.
- 30 8. A device as set forth in claim 5, further including a guard assembly positioned on the head of the broom to protect the spray jets against damages.

9. A device as set forth in claim 8, wherein the guard assembly includes a plurality of guards projecting from the head of the broom, each positioned adjacent a spray jet.

5 10. A device as set forth in claim 8, wherein the guard assembly includes a plurality of recesses on the head of the broom, each recess designed to accommodate a spray jet.

10 11. A device as set forth in claim 1, wherein the mechanism includes a motor attached to the spray bar.

12. A device as set forth in claim 11, wherein the motor includes an actuation assembly powered by fluid to be discharged through the spray bar.

15 13. A device as set forth in claim 11, wherein the motor includes a control mechanism to permit setting of a desired oscillation frequency.

14. A device as set forth in claim 1, further including a port in communication with the spray bar, so as to permit debris to be removed from the spray bar through the port.
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15. A device as set forth in claim 9, further including a plug to seal the port and prevent fluid from leaking through the port during operation of the spray bar.

16. A device as set forth in claim 1, further including a pressurizing mechanism to
25 generate additional pressure for fluid being discharged from the spray bar.

17. A device as set forth in claim 16, further including a trigger to permit regulation of the generation of pressure.

30 18. A device for sweeping across a substantially horizontal surface, the device comprising:

a broom having a head for sweeping across the horizontal surface and a handle attached thereto for pushing the head;

a spray bar disposed on the head for directionally discharging fluid onto the horizontal surface across which the head may sweep; and

a mechanism to permit fluid discharging from the spray bar to be discharged in a pulsating manner.

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19. A device as set forth in claim 18, further including a valve attached to the broom for regulating the flow of fluid to the spray bar

20. A device as set forth in claim 18, wherein the spray bar includes a plurality of spray jets for individually discharging a stream of fluid from the spray bar.

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21. A device as set forth in claim 20, wherein the spray jets are positioned along a plurality of rows.

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22. A device as set forth in claim 20, wherein the spray jets are removably disposed on the spray bar to permit access within the spray bar.

23. A device as set forth in claim 20, further including a guard assembly positioned on the head of the broom to protect the spray jets against damages.

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24. A device as set forth in claim 23, wherein the guard assembly includes a plurality of guards projecting from the head of the broom, each positioned adjacent a spray jet.

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25. A device as set forth in claim 23, wherein the guard assembly includes a plurality of recesses on the head of the broom, each recess designed to accommodate a spray jet.

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26. A device as set forth in claim 20, wherein the mechanism includes a motor in communication with the plurality of spray jets and having a control to generate various pulsating patterns through the plurality of spray jets.

27. A device as set forth in claim 26, wherein the various patterns are generated by discharging fluid through each spray jet individually, in groups, simultaneously or a combination thereof.

5 28. A device as set forth in claim 18, further including a port in communication with the spray bar, so as to permit debris to be removed from the spray bar through the port.

29. A device as set forth in claim 28, further including a plug to seal the port and prevent fluid from leaking through the port during operation of the spray bar.

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30. A device as set forth in claim 18, further including a pressurizing mechanism to generate additional pressure for fluid being discharged from the spray bar.

15 31. A device for sweeping across a substantially horizontal surface, the device comprising:

a broom having a head for sweeping across the horizontal surface and a handle attached thereto for pushing the head;

a spray bar disposed on the head for directionally discharging fluid onto the horizontal surface across which the head may sweep;

20 a mechanism for manually varying an angle at which fluid may be discharged from the spray bar; and

a guard assembly positioned on the head of the broom to protect the spray bar against damages.

25 32. A device as set forth in claim 31, wherein the spray bar includes a plurality of spray jets for individually discharging a stream of fluid from the spray bar.

33. A device as set forth in claim 32, wherein the spray jets are positioned along a plurality of rows.

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34. A device as set forth in claim 31, wherein the spray jets are removably disposed on the spray bar to permit access within the spray bar.

35. A device as set forth in claim 31, wherein the guard assembly includes a plurality of guards projecting from the head of the broom, each positioned adjacent a spray jet.

5 36. A device as set forth in claim 31, wherein the guard assembly includes a plurality of recesses on the head of the broom, each recess designed to accommodate a spray jet.

10 37. A device as set forth in claim 31, further including a port in communication with the spray bar, so as to permit debris to be removed from the spray bar through the port.

38. A device as set forth in claim 37, further including a plug to seal the port and prevent fluid from leaking through the port during operation of the spray bar.

15 39. A device as set forth in claim 31, further including a pressurizing mechanism to generate additional pressure for fluid being discharged from the spray bar.

40. A device for sweeping across a substantially horizontal surface, the device comprising:
20 a broom having a head for sweeping across the horizontal surface and a handle attached thereto for pushing the head;
a spray bar disposed on the head and having a plurality of spray jets for directionally discharging fluid through the spray jets onto the horizontal surface across which the head may sweep;
25 a first mechanism for actuating the spray bar in an oscillating manner, so as to permit fluid discharging from the spray jets to move back and forth along an arcuate path; and
a second mechanism to permit fluid to be discharged from the spray jets in a pulsating manner.

30 41. A device as set forth in claim 40, wherein the second mechanism is capable of generating various pulsating patterns by discharging fluid through each spray jet individually, in groups, simultaneously or a combination thereof.

42. A device as set forth in claim 40, wherein the second mechanism is capable of generating pulsating patterns through some spray jets, while permitting fluid to be discharge continuously through other spray jets.

5 43. A method of cleaning a surface, the method comprising:
providing a broom having a head and a handle attached to the head;
coupling to the head a spray bar capable of oscillating back and forth along an arcuate
path for directionally discharging fluid onto a horizontal surface across which the head may
sweep;
10 positioning the head of the broom behind debris to be swept;
generating a fluid discharge through the spray bar while permitting the spray bar to
oscillate;
pushing the handle so as to move the head of the broom in a sweeping manner across
the horizontal surface, such that the debris is moved therealong; and
15 discontinuing the fluid discharge through the spray bar.

44. A method of cleaning a surface, the method comprising:
providing a broom having head and a handle attached to the head;
coupling to the head a spray bar capable of permitting fluid to be discharged in a
20 pulsating manner onto a horizontal surface across which the head may sweep;
positioning the head of the broom behind debris to be swept;
generating a fluid discharge through the spray bar while permitting the spray bar to
discharge fluid in a pulsating manner;
pushing the handle so as to move the head of the broom in a sweeping manner across
25 the horizontal surface, such that the debris is moved therealong; and
discontinuing the fluid discharge through the spray bar.